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- 1. An apparatus for providing roof support in an underground mine, comprising:
- (a) a round, dome-shaped support member having an extended lateral surface for contacting an inside roof of an underground mine; and

- (b) a center aperture in said support member for accommodating a roof bolt such that said roof bolt can be passed through said support member to secure said support member to the roof of said underground mine.
- The apparatus as set forth in Claim 1, further comprising a base plate associated with said roof bolt, wherein said roof bolt passing through said base plate is adapted such that said support member is interposed between said base plate and the inside roof of said underground mine.
- 3. The apparatus as set forth in Claim 1, wherein said support member is recessed and said extended lateral surface comprises a circular configuration in the general form of a plate.
 - 4. The apparatus as set forth in Claim 3, wherein said support member features a center deflection with respect to the radial edge of said support member such that said support member is convex with respect to the mine roof surface.

- 5. The apparatus as set forth in Claim 2, wherein said support member is elliptical with a circular configuration in the form of a plate.
- 6. The apparatus as set forth in Claim 5, wherein said support member features a center deflection with respect to the radial edge of said support member such that said support member is convex with respect to the mine roof surface.

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- 7. In combination with a roof bolt and associated base plate used for primary roof support in an underground mine, the improvement comprising: a round dome-shaped support member having an extended lateral surface for contacting an inside roof of an underground mine, and further defining an aperture therethrough such that said roof bolt can be passed through said base plate and the aperture of said support member to secure said support member to the inside roof of said underground mine, with said support member interposed between said base plate and the inside roof of said underground mine.
- 8. The apparatus as set forth in Claim 7, wherein said support member has a substantially circular or elliptical configuration.
- 9. The apparatus as set forth in Claim 8, wherein said support

 20 member features a center deflection with respect to the radial edge of said support member such that said support member is convex with respect to the mine roof surface.

- 10. A method for providing primary and secondary roof support in a underground mine, comprising the steps of:
- (a) drilling a hole through a roof of the underground mine and into upper level rock strata;
 - (b) inserting a container of adhesive material into said hole;
- (c) positioning a lateral support member adjacent the roof of said underground mine centered over said hole;

- (d) positioning a round dome-shaped base plate adjacent said lateral support member; and
- (e) inserting a roof bolt through said base plate and said support member into said hole, the insertion of said roof bolt fracturing the container of adhesive material, thus allowing said adhesive material to be distributed around said roof bolt, securing said roof bolt in said hole and securing said base plate and support member to the roof of said underground mine for providing primary and secondary roof support.
 - 11. The method as set forth in Claim 10, wherein said support member features a center deflection with respect to the radial edge of said support member such that said support member is convex with respect to the mine roof surface.
 - /12. A roof bolt plate apparatus, comprising:
 - (a) a round or elliptical dome-shaped plate;
 - (b) a recessed center higher than the outer rim; and

- (c) strengthening ribs to adjust the strength as needed for extreme roof conditions.
- 13. A roof bolt plate apparatus as set forth in Claim 12, further comprising;
- 5 (d) an outer rim only as wide as the material used to produce the plates.
 - 14. A roof bolt plate apparatus as set forth in Claim 13, wherein said roof bolt plate comprises a positive pressure roof support.
- 15. A method of supporting a roof in an underground mine,
 comprising:
 - (a) providing a plate acting as a lock washer to the roof bolt;
 - (b) providing a round or elliptical dome-shaped plate having apertures for hanging cables;
- (c) providing a plate having a recessed center lower then the

 outer rim and having a recessed center such that the head of the bolt

 will be partially protected, when installed in the roof;
 - (d) providing a plate outer rim conforming to regular or irregular roof surfaces; and
- (e) providing a plate adjustable in strength by adding a rib to 20 the domed area of the plate.

- 16. A method of supporting a roof in an underground mine as set forth in Claim 15, further comprising installing and monitoring plate effectiveness by the lock washer effect in the mine.
- 17. A method as set forth in Claim 15, wherein said safety plate recessed center reduces injuries to personnel and damage to the roof control system by passing equipment.

- 18. A method as set forth in Claim 15, further comprising providing a system for hanging cables and wires and maintaining dangerous electrical cables and wires close to the roof, and out of harms way.
- 19. A method as set forth in Claim 16, wherein said safety plate recessed center reduces injuries to personnel and damage to the roof control system by passing equipment.
- 20. A method as set forth in Claim 17, further comprising providing a system for hanging cables and wires and maintaining dangerous electrical cables and wires close to the roof, and out of harms way.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Applicants: Bert W. Slater

Atty. Dock.: BWS01 (As Amended)

Serial No.: 10/619,232

Examiner:

Filed:

CITY DOUGLAS GLANTZ

July 14, 2003

Art Unit: 3673

For:

Roof Bolt Bearing Plate and Method for an Underground

FILE COPY

Mine

I hereby certify that this correspondence is being facsimile at (703) -746-9195 addressed to: Office of Initial Patent Examination's, United States Patent and Trademark Office. Washington, D.C. 20231 on October 27, 2003.

Date of Signature: October 27, 2003

Office of Initial Patent Examination's Filing Receipt Corrections

Alexandria, VA 22313

Sir:

LETTER OF CORRECTION

Please enter the enclosed Letter of Correction in Response to the Filing Receipt mailed October 10, 2003 in the above-identified patent application.

The Attorney Docket Number on the filing receipt is incorrect.

Please change the Attorney Docket Number to -- BWS01--.

A marked-up copy of the Filing Receipt mailed October 10,

2003 is enclosed with markings to show the changes made.

Reconsideration of this application is requested.

Respectfully submitted,

October <u>27</u>, 2003 Douglas G. Glantz Attorney At Law

5260 Deborah Court

Doylestown, PA 18901 Voice (215) 794-9775

Fax (215) 794-8860

DGG/mnr

No. 29,640

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IN THE UNITED STATES PATENT AND TRADEMARI

In re application of:
Applicant: Bert W. Slater

Serial No.: 10/619,232 Filed:

For:

July 14, 2003 Roof Bolt Bearing Plate)

And Method for an

Underground Mine

Commissioner of Patents and Trademarks

Box 17

Washington, D.C. 20231

Sir:

REFUND REQUEST AND STATUS INQUIRY

Further to the Refund Request dated September 30, 2003, the state of the state of the state above captioned U.S. patent application.

A utility patent application with four (4) Independent Claims was filed in the USPTO on July 14, 2003 in the above-STATUS AND ENTITY identified patent application. The filing fees were paid by check. The filing fee check only paid for three (3) Independent Claims. Four (4) Indepandent Claims were filed with the application.

Examiner:

Applicant is a small entity and was indicated as such on the Utility Patent Application Transmittal PTO/SB/05 and on the Fee Transmittal PTO/SB/17 Sasa Charle March Science

A charge of \$84.00 was made to Deposit Account 07-1380, copy enclosed. This represents an Overcharge of \$42.00.

The fee should have been \$42,00 for the additional Independent Claim in excess of three (3) for a small entity.

Accordingly, the charge of \$84.00 should have been \$42.00 made to Deposit Account 07-1380. Chanille of Alexander

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The refund may be refunded to Deposit Account 07-1380. duplicate copy of this page is enclosed.

Respectfully submitted,

March 45, 2004 Incensure Cleans

SENT CLARESTERS

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Doylestown, PA . 18901-1949

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